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# SIDELIGHTS ON THE EXPLOITATION OF EGYPT.

BY THE HON. FREDERIC C. PENFIELD, U. S. DIPLOMATIC AGENT  
AND CONSUL-GENERAL TO EGYPT.

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AMONG the nations of the earth stands one unique in history and in unusual and paradoxical conditions. Surprising and fascinating as it was to Herodotus, even so is it to the observer of to-day, who easily discovers why the Land of the Nile has so long been written of as Egypt the Mysterious, the Inexplicable, and the Unexampled. And the student who interprets the trend of current events must admit that the twentieth century will dawn on a new Egypt, Egypt the Prosperous, ruled by a Khedive thoroughly in earnest in his resolve to mark his reign as one of humanity and progress.

The country's political condition has no parallel. Nominally a province of the Ottoman Empire, it is also autonomous, subject to an annual tribute to the Sultan of about \$3,500,000. The title of its ruler means sovereign, or king, without qualification or limitation ; yet the country is in a great measure administered by six European powers, who practically hold it in trusteeship for creditors, one of which is dominant and in "occupation" with an army and hundreds of civil functionaries. Egypt is purely agricultural, yet has no department or ministry of agriculture.

Whatever its degree of abundance in forgotten ages—and in Biblical times it was a land flowing with milk and honey—the era of utilitarianism and practicability, now fairly launched, will for the next few years be sufficient to draw universal attention to the old land of Pharaoh and Joseph.

Until recent years Egypt represented a large part of north and central Africa. But since Gordon's death and Hicks Pasha's defeat the process of territorial contraction has been rapid. The

whole of the upper valley of the Nile and the vast regions under Egyptian rule, extending almost to the Equator, are lost—"abandoned," say English chroniclers—and the deposed Ismail sees his hopes of a magnificent empire perish, never likely to be realized by his khedivial grandson.

But now comes the season of expansion—not to be accomplished by battling armies, diplomatic victories, or purchased acquisitions. Irrigation is to be the factor—the irrigation of definite science, rather than of chance or guesswork, and the scheme is grand enough to take its place with the building of the Pyramids and the Suez Canal. Stated simply, it is the doubling of the cultivable area of a country dependent on the soil

The Egypt of the map shows upward of 400,000 square miles, an area seven times as great as New England ; but the practical Egypt—that which sustains life—is not as large as the States of Massachusetts and Connecticut together. This is the ribbon-like strip of alluvial land bordering the Nile, and forming, strictly speaking, an elongated oasis in the desert. As readers know, Egypt is almost rainless and dewless. The exploitation is no less magnificent in conception than the forcing back of the Libyan and Arabian deserts so far that nearly two Massachusetts and two Connecticuts may be brought under the plough. This is exploitation in its true sense, and its accomplishment will be a verification of the saying that Egypt is the Nile and the Nile is Egypt.

The Pyramids and the Sphinx have borne testimony through the centuries to the grandeur and power of execution which dwelt within the Nile Valley. And what more fitting now than that the same valley be the theatre of a gigantic engineering exploit, audacious, but of almost certain results ?

Until recently the Nile was a blessing only half appreciated ; but a mightier Egypt is at hand, whose fertile fields will extend beyond the horizon upon those sands where now only the camel contends with primitive nature ; and the same Nile on which Moses was cradled will be harnessed to man's purposes and guided by canals far into that desert through which he led the children of Israel.

What an object-lesson in the application of science ! It can have no more interested observers than in America, especially in Colorado, Nevada, and California, and other States of the West,

where the irrigation expert is succeeding the railway builder as a developer.

I will claim a wider audience, comprising every person interested in cotton culture in the United States, however remotely. Thirty years or so ago, when that dauntless English traveller, Samuel Baker, gave to the world an account of his researches in equatorial Africa—which proved that the Nile had its origin in Lakes Victoria and Albert—he went so far as to say :

“The Nile might be so controlled that the enormous volume of water that now rushes uselessly into the Mediterranean might be led through the deserts to transform them into cotton-fields that would render England independent of America.”

To read these lines in the light of subsequent events, with England taking as keen an interest in Egypt as if it were part of the British Empire, causes one to ponder long and deep. Sir Samuel Baker was a far-seeing man; and his gift of prophecy was his strongest characteristic, in my judgment.

The expansion so generally discussed means more to the people of the United States than they realize. But I will treat the work in its universality, leaving the sidelights of American interest to be made apparent.

The question of irrigation was considered and experimented upon by the Pharaohs and Ptolemies; it must have been, as in their day Egypt was the granary of the world. When Napoleon conquered the country in 1798, his engineers and *savants* were given the task of augmenting the cultivation of the soil, that the peasantry might be lifted from degraded poverty. Mehemet Ali laid down the sword for the plough, and irrigation affairs have ever interested his successors. The Barrage, near Cairo, ministering to the fertility of the Delta, was built by them, with the aid of French constructive skill; and the reign of the present Abbas promises to be rich in triumphs of this order, whatever the nationality of the engineers whose abilities play a part.

Since the events of 1882, a feature of the British coöperation in repairing the broken fortunes of the Nile country has been enhanced irrigation. Engineers of other nations have devoted untiring study to the safe storage of the surplus waters of high Nile, that they may be systematically employed during the months of low Nile, when the whole country is athirst; and none more unselfishly than Cope Whitehouse, an American, who has spent the best

part of ten years and much money in an intelligent study of the subject, keeping it persistently before the notice of the Khedivial Government. His Lake Moëris project, however, is not considered adaptable to giving the thirsty upper Nile Valley its water for summer crops. It would be a boon to the Fayoom and the Delta, and may eventually be utilized. It is argued that the money to be expended belongs to every husbandman in the land, and that all should be benefited. This is a reason for placing the reservoir above Assouan, from whence its waters would reach every section of industrial Egypt.

As in the case of all great works, there are many plans and theories for accomplishing the same end. Each has points of merit, and drawbacks more or less grave.

To better assist the Public Works department of the Egyptian Government in a decision as to the best plan under submission, a committee of three European hydraulic experts was called to Egypt a few months ago, and the matter laid before them in its entirety. It has been generally spoken of as an International Technical Commission, and the opinion was current that it had plenary power to select a plan. I cannot discover why the commission was called "International," in a sense applicable to a country where six powers must be consulted on all questions involving unusual financial outlay, and fourteen powers on measures pertaining to judicial and sanitary questions. The commission naturally was headed by an English engineer, Sir Benjamin Baker, of Forth Bridge fame, and his associates were a Frenchman and an Italian. Every effort to have an American included, as advised by no less a judge of such matters than Sir Colin Scott Moncrieff, was futile.

The several projects were laid before the committee, presumably, to select the one possessing the most obvious advantages, independent of æsthetic and archæological considerations. Four contemplated the construction of a dam across the river; and another, originating with Whitehouse, proposed to employ a depression in the desert, which, when filled, would be as large a body of water as Lake Geneva in Switzerland.

Imagine the consternation of every person in the Old and New Worlds, of artistic or classical tastes, when the English and Italian members of the committee reported in favor of a dam seventy feet high at Assouan, which would bury from sight the

ruins of the Island of Philæ, that most brilliant gem in the diadem of Ancient Egypt. This was to art an unhappy verdict, indeed, whose devotees could not believe that the spoliation of Philæ was demanded. Every one applauded the magnificent prospect of increased prosperity to Egypt, but the clamor for another site was great—a site that would reconcile the interests of agriculture with those of history, art, and archæology.

Newspaper dispatches followed, stating that representatives of the Department of Public Works had gone to England with plans of machinery required for building the Assouan dam. This accentuated the feeling of horror to such an extent that the press of Europe cried out against the impending sacrilege.

Meetings have been held by many learned societies to protest against any disturbance of Philæ, and their memorials are pouring into Egypt. In England, the Society for the Preservation of the Monuments of Ancient Egypt has been untiring to save Philæ and the dozens of temples and remains in close vicinity. Besides its memorial, widely signed in England, Scotland, and Ireland, others of similar tenor and purpose have been prepared in France by the *Académie des Inscriptions* and by about 250 of the foremost members of the *Institut de France*. In Germany about 600 distinguished persons, including Egyptologists, professors, artists, antiquaries, archæologists, and literary men, have joined in a very strong protest. Sir Frederick Leighton, President of England's Royal Academy, has not hesitated to say that any tampering with Philæ would be a lasting blot on the British occupation of Egypt.

The ruins of Philæ are the most imposing and beautiful monuments of Upper Egypt, owing to their peculiar situation upon a rocky island commanding the passage of the Nile above the First Cataract. Assouan and this neighboring island are the objective points of hundreds of Americans every winter, whether they journey by the independent dahabiyah, or under the guidance of that universal benefactor, Cook, whose enterprise opened the Nile to travellers of moderate means or limited time. The German lines of steamers running from New York to Alexandria have made of Egypt the winter playground for thousands of well-to-do Americans, and many go to Philæ. Some visit the Nile for that purpose alone.

England's diplomatic representative, Lord Cromer, evidently

feeling that an outburst of disapproval would follow the announcement that Philæ was in danger, officially informed his government :

"It will, in the event of the Assouan project as it now stands being, from other points of view, considered preferable to any other, be necessary to consider what weight should be attached to the archæological argument based on the evident undesirability of submerging or removing the temple of Philæ. I still hope that some plan may be found for conciliating engineering necessities with the archæological interests which are at stake."

Mr. Garstin, the astute Under-Secretary of Public Works, an Englishman, one of whose associates had advised the removal of the precious temple to an adjoining island, or to lift the entire island of Philæ to a height clearing the flood line of the proposed reservoir, recorded his views in these words :

"Any work which caused either partial damage to, or the flooding of, this beautiful temple would be rightly considered by the whole civilized world as an act of barbarism. Moreover, it would be an act not absolutely necessitated by the circumstances, for we have other possible though somewhat inferior sites upon which to construct dams."

On the other hand Mr. Garstin says :

"Could the removal of the temple be successfully carried out, I cannot myself see that it would be an act of vandalism, which, as I read it, is a term meaning the wanton destruction of interesting relics."

Sir Benjamin Baker favors the raising of the island, as a whole, some twelve feet, and offers to do it for a million dollars, guaranteeing its safe accomplishment.

Think of moving Bunker Hill Monument to another site, or placing it on stilts, to reconcile it to a new order of landscape gardening !

The engineers who advocated the moving of Philæ did so because the Assouan site offered superior advantages from an engineering standpoint. The foundation of the dam would be a solid bed of granite. A situation farther up the river, at Kelabsheh, which would leave Philæ unmolested, would insure exactly the same benefits, it is claimed by competent judges, but the foundation would be sandstone. Public opinion is almost unanimous in demanding that it be adopted, if Egypt is to place on her frontier any dam ponding back a hundred miles into Nubia a body of water sufficiently vast to leave no living thing in Egypt's valley, were it liberated by foe or accident.

The French engineer advises against a great storage reservoir anywhere, favoring a series of smaller dams extending nearly to

Khartoum, to carry out which plan would necessitate a conquering army to precede the battalions of masons and diggers.

I would call the attention of scholarly America to the jeopardized position of one of the world's greatest treasures, in the country that begot science and learning. All talk about removing Philæ is too fantastic even for the pen of a Jules Verne. If its wondrous structures are disturbed at all, let them be re-erected on the Island of Rhoda, at Cairo. This would carry the spirit of utilitarianism to its utmost degree, and bring to the doors of the tourists' hotels one of the incentives of a winter's voyage up the Nile.

It is difficult to believe that the recommendation of the English and Italian engineers will not be set aside in deference to the opinion of that greater jury—the public.

To complete a Nile dam and its canals no less a sum than fifteen million dollars will be necessary. The money is actually in hand, the result of an economy effected by the recent conversion of a portion of the nation's debt from a high rate of interest. The six European powers will approve its expenditure in so promising an improvement, as a mortgagee favors the making of repairs on a bonded property, at the expense of the mortgagor. The Egyptian treasury will expect to be recouped, two or three years after the completion of the reservoir and its system of distributing canals, in taxes levied on the land as it becomes productive. Financially it presents a roseate future, certainly.

Naturally there will be obstacles, structural at least, whatever project is agreed upon. But those who express opinions publicly, in Egypt and Europe, touch slightly upon them. When one learns that the population is comfortably occupied with the cultivation of the present area, he appropriately asks where the increase of labor to till the double Egypt is coming from. Irrigation is not going to supply it, and it is not easy to induce the people of the Soudan and Nubia in any numbers to take up husbandry under Egyptian masters. I shall look to labor-saving machinery to solve the problem, however great the fellah's aversion to it, and I would like to see American implements and inventions succeed the slow-coach tools of mediæval times in the hands of those tilling the new Egypt.

Perennial irrigation is agreed upon by all taking part in the country's management, and it means much to the United States

of America, if those assisting the Khedivial Government possess the opinion expressed by their countryman, Explorer Baker, thirty years ago. Every acre wrested from the desert by the magical mud and water of the Nile will be capable of producing a bale of cotton, superior enough to command a quick market, presumably to the exclusion of a bale of American-grown cotton, for Egypt is already our aggressive competitor in that important fibre.

Whatever the crop may be in the Southern States, it surely is "king" in Egypt, with the Delta of the Nile for its throne. The soil and climate are so perfectly adapted to cotton raising that it is the governing crop, and brings enough money to the country to indirectly pay the interest on the enormous debt created by the lavishness of Ismail, and is so surely redeeming the land from the grasp of its creditors that Egyptian bonds have sold at a premium during the recent times of financial distrust.

Eight or ten years ago Egypt was insolvent. To-day she is bristling with prosperity. The position of the fellaheen is constantly improving. The *corvée* is abolished, and the people have no more compulsory labor, except to keep the Nile within bounds at high flood, for which they are paid. The land taxes are gradually being reduced, and extortion and corruption seem to have been stamped out. She sells cereals enough to pay for the imported articles necessary to maintain her simple standard of life. I can't help thinking that cotton—or the money it produces—has played a part of no small importance in the work of administration that has brought all these blessings.

A bird's-eye view of the area of cotton cultivation would give the outline of a half-opened fan. From the point of the Delta near Cairo it stretches nearly to Port Said on the northeast and beyond Alexandria on the northwest, this simile being helped by the great arc curving into the Mediterranean, the narrow strip devoted to cotton along the Nile from Cairo, a hundred miles southward, forming the handle. This area is veined with innumerable canals, branching from the Rosetta and Damietta arms of the Nile, which distribute the vitalizing waters.

The soil, first created by the deposits of the great river and ever fertilized by it, is perhaps the richest in the world, and is tilled with such ease and certain results as to compel the New

Englander who sees it to draw a comparison between farming at home and that occupation there. The Egyptian peasant is by instinct at once farmer and irrigation expert. With two or three primitive implements, such as a wooden plough, a mattock, and a water-hoisting "shadoof," his labors are blessed with success beyond the possibility of tillers of the soil elsewhere. The Nile, the cause of this fertility, brings from the Abyssinian mountains the deposit so wonderfully rich that other fertilizers are unnecessary, and the subsidence of the annual flood leaves the ground in a condition requiring scarcely more than a scratching with the plough to prepare it for planting. This done, the farmer has only to raise water daily from the river and direct it to the roots of his crops. Experience teaches him to "rotate" cotton with a less exhausting cereal, and he never has drought, frost, labor or tariff questions, or other serious menace, to deal with. His family supplies most of the labor, the women taking a lighter share of the work. This peasant has few ordinary comforts. He subsists on a meagre vegetable diet, receives no governmental documents dealing with agricultural facts and statistics, has no need for newspapers—in fact, only knows how to read the Koran. His concern in life appears to be, with Allah's help, to grow a good crop, harvest it at the right moment, and dispatch it to the nearest ginning establishment, get his cash, or be released from financial obligations, pay his land tax, and renew the lease of his farm. The land tax is heavy, and he has little money left after paying his rent to the landlord pasha, living in Cairo or Alexandria.

Added irrigation provided, what I have pictured as a half-opened fan—the Delta—may be unfurled on its western boundary almost indefinitely, and cotton would certainly have preference over other crops, as the Delta is given up to it. The incalculable increase of acreage there would come into definite competition with our country, while sugar and corn would naturally follow the alluvial extension between Assiout and Assouan.

This year's cotton territory is at least 1,072,500 acres. As desert soil is reclaimed, cotton cultivation is extended in preference to other crops, for Egypt's long staple commands a ready market at high prices. This accounts for the increase from 329,000 bales in 1882-83 to 680,085 bales in 1892-93. An Egyptian bale weighs from 700 to 750 pounds, against our bale of about 500 pounds.

Good Egyptian cotton brings from one to two cents per pound more than American upland cotton, owing to its superior staple and silky appearance, and the entire stock is exported. Last year it realized upwards of \$45,000,000. About ten years ago Egyptian cotton was introduced into the United States and its advantages so successfully explained to millowners of New England that the trade grew with astonishing rapidity, until the exportation from Egypt aggregated upwards of 42,000 bales in the season of 1892-93—the equivalent of more than 60,000 American bales—valued at over \$2,500,000, and constituting  $2\frac{1}{2}$  per cent. of the staple consumed last year in America.

To the casual reader this will be surprising, and he will be slow to believe that the United States—which produce twice as much as the combined crops of India, Egypt, Brazil, Peru, Turkey, and the West Indies—ever imported a bale of raw cotton.

This year's cotton area is the largest ever planted in Egypt, and I can predict the greatest crop in the country's record, namely, 700,000 bales, or the equivalent of 1,050,000 American bales. This prognostication will reveal, to one who analyzes closely, that the Egyptian fellah gets what would be an American bale from an acre, while the Southern grower considers himself fortunate to secure a bale from two acres, as cotton lands run. Over-production has few terrors for the Egyptian, and he can stand a falling market better than the American grower.

Those interested insist that the use of Egyptian cotton is not antagonistic to home principles, for with its strong staple between an inch and an inch and a half in length, it is employed in the production of fine underwear, balbriggan hosiery, and fine threads requiring a finish for which home-grown cotton is unsuited. It gives to fabrics a gloss like silk, which makes it invaluable for use in cotton-mixed "silk goods." Further, it is claimed by those wishing to prove that it does not conflict with American cotton, that its use has developed a profitable business in manufactures for which the latter is not adapted; also that native-grown staple is utilized in a manner impossible without the imported article as a basis. What argument is made by Southern planters against the importation of this *coton de luxe* I am not informed. The Egyptian cotton has almost entirely superseded American cotton abroad for the production of lisle thread goods. The extent of its introduction in this country would be

enough to show that it must be making even greater headway abroad. Outside the United States it is largely used where Sea Island was formerly.

Resourceful America, I believe, can fortify her position in this matter. The Egyptian staple having an admitted value for special manufactures, why should not our agricultural genius meet the want? The suggestion is obvious to one aware of the enormous demand for the Egyptian fibre, which is clearly a favorite. Who can say it will not be the cotton of the future?

With our range of climate and soil, any crop should be possible. One would suppose the Mississippi bottom lands would offer conditions approaching those of Egypt. I am glad to know that the Agricultural Department is taking a very active interest in this question. Experiments should be systematically pursued until the South can supply Northern mills with cotton as acceptable as that produced by the fellaheen of the Nile. The prospect of offering this particular staple to Europe in competition with Oriental labor presents little hope, as possible reductions in land rent and taxation would give the Egyptian—content with a fraction of the pay of the workingman of the South—a lead not easily to be overcome, without reference to the quality of his cotton.

A writer in a Boston journal, commenting on a recent communication by me to the State Department, on the subject of the marvellous growth of the use in America of Egyptian cotton, goes into an analysis of the business, admitting that the Egyptian article is a necessity for diversified manufacture, and that its use is more helpful than otherwise to our cotton manufacturing interest. He goes further and affirms that the cultivation of long-stapled cotton in the South can be effected only under forced conditions, high natural or artificial richness of soil, and comprehensive husbandry, costing money and intelligence.

If money and intelligence may be made useful in supplying domestic spindles with domestic fibre of the highest grade, we can command the situation, surely.

Cotton growers of India until recently believed they could not produce long-stapled cotton. Now, as a result of judicious experiment with Egyptian seed, they find they can, and purpose entering the field of competition.

FREDERIC COURTLAND PENFIELD.